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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,903	11/13/2003	Joseph D. Tobiason	117275	7310

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OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

RODRIGUEZ, ARMANDO

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/705,903

Applicant(s)

TOBIASON ET AL.

Examiner

ARMANDO RODRIGUEZ

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-21 is/are rejected.
- 7) ☐ Claim(s) 11,22 and 23 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/29/2005, 2/2/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10, 12-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zorabedian (US 6,108,355) in view of Katagiri et al (US 6,157,025).

Regarding claims 1, 9, 10, 12, 13, 14, 15, 17 and 18,

Zorabedian illustrates in figure 1A an external cavity laser having a laser (102), a reflector (122), a lens system (164), a quarter wave plates/optical retarders (112-114) [applicant's isolation element] an etalon filter (162) [applicant's transmission filter] including a wedge shaped corrective element (120) [applicant's compensation prism], column 4 lines 8-10, discloses tuning of the cavity by translation of the wedge shaped

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filter and in column 4 lines 59-63, discloses cascading the corrective element with the filter to vary the cavity length in synchronism with the filtered wavelength. Column 3 lines 44-46 discloses the etalon as a wedge air gap.

Zorabedian does disclose translating the wedge shaped filter but is silent as to the rotation of the filter.

Katagiri et al illustrates in figure 2 a tunable optical filter (15) including a substrate (14) coupled to a rotation mechanism (13) [applicant's rotary motor] for rotation of the filter.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the rotation mechanism of Katagiri et al with the wedge filter system of Zorabedian because it will provide a high speed wavelength discrimination in a optical communication system, column 1 lines 6-9 of Katagiri et al.

Regarding claims 2 and 3,

Zorabedian does disclose varying linearly the wavelength of the filter, column 4 lines 8-16 and the thickness of the corrective element, as illustrated in figure 1A.

Regarding claim 4,

Zorabedian does not disclose the filter having a wavelength cycles around a track.

Katagiri et al illustrates in figure 7 the optical filter including a track control concentric with the axis of rotation.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the rotating filter of Katagiri et al with the laser

system of Zorabedian because it will provide a high speed wavelength discrimination in a optical communication system, column 1 lines 6-9 of Katagiri et al.

Regarding claims 5 and 8,

Zorabedian does disclose a corrective element with varying thickness but is silent as to rotation of the filter for providing of thickness cycles.

Katagiri et al illustrates in figure 2 a tunable optical filter (15) including a substrate (14) coupled to a rotation mechanism (13) for rotation of the filter.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the rotation mechanism of Katagiri et al with the wedge filter system of Zorabedian because it will provide thickness cycles and high speed wavelength discrimination in a optical communication system, column 1 lines 6-9 of Katagiri et al.

Regarding claims 6 and 16,

Zorabedian discloses in column 4 lines 23-25 the tuner (160) having wavelength feedback [applicant's trigger feature].

Regarding claim 7,

Zorabedian does not disclose the filter having multiple transmission wavelength cycles.

Katagiri et al illustrates in figure 7 the optical filter including first and second filter layers (15A) and (15B) parallel to each other.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the rotating filter of Katagiri et al with the laser

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system of Zorabedian because it will provide a high speed wavelength discrimination in a optical communication system, column 1 lines 6-9 of Katagiri et al.

Regarding claims 19-21,

Zorabedian does disclose preventing mode hopping, see column 4 lines 38-46.

Allowable Subject Matter

Claims 11, 22 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ARMANDO RODRIGUEZ whose telephone number is 571-272-1952. The examiner can normally be reached on 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MINSUN HARVEY can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ARMANDO RODRIGUEZ
Examiner
Art Unit 2828

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